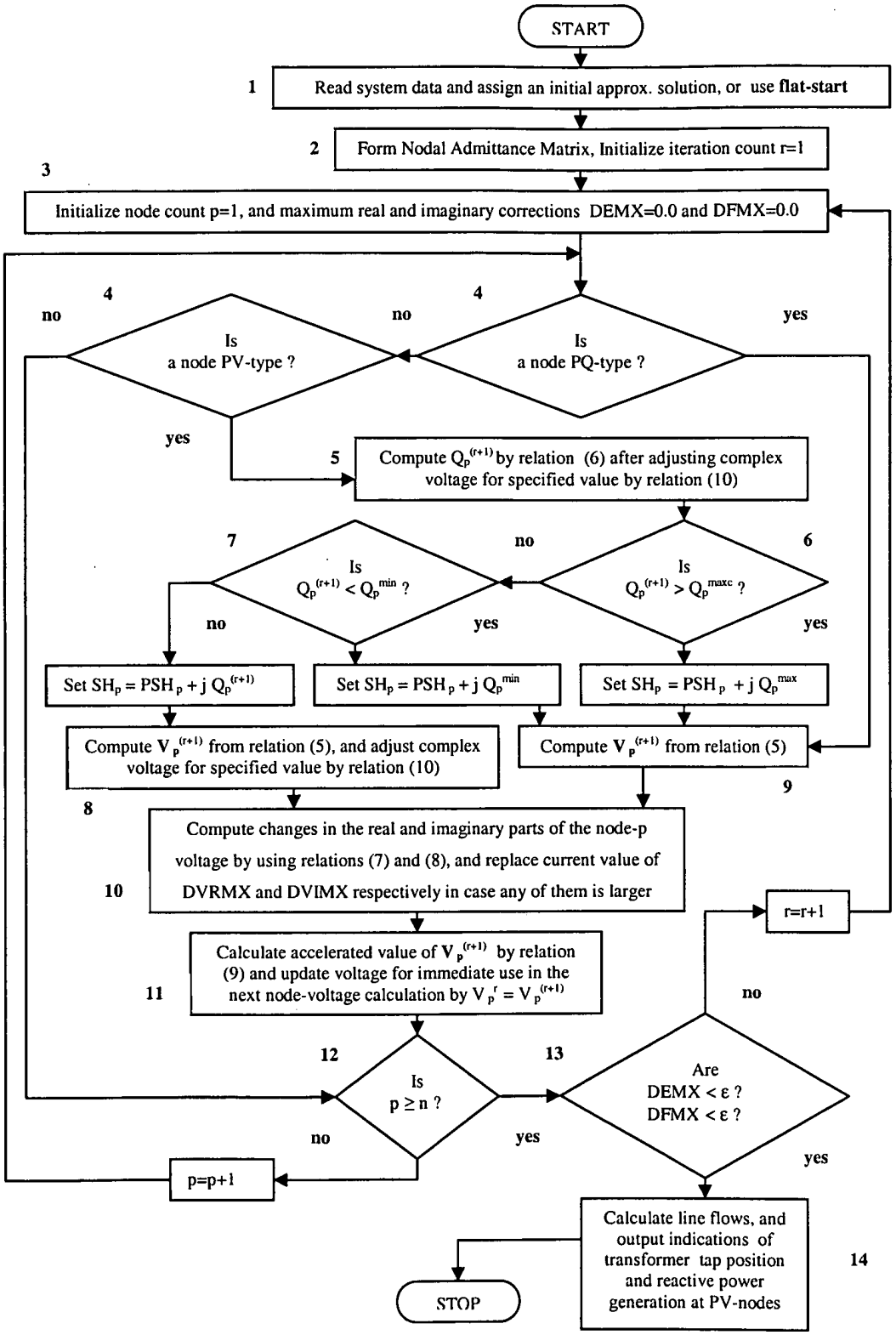

Fig. 1a: Prior Art: flow-chart of Gauss-Seidel Loadflow (GSL) Method

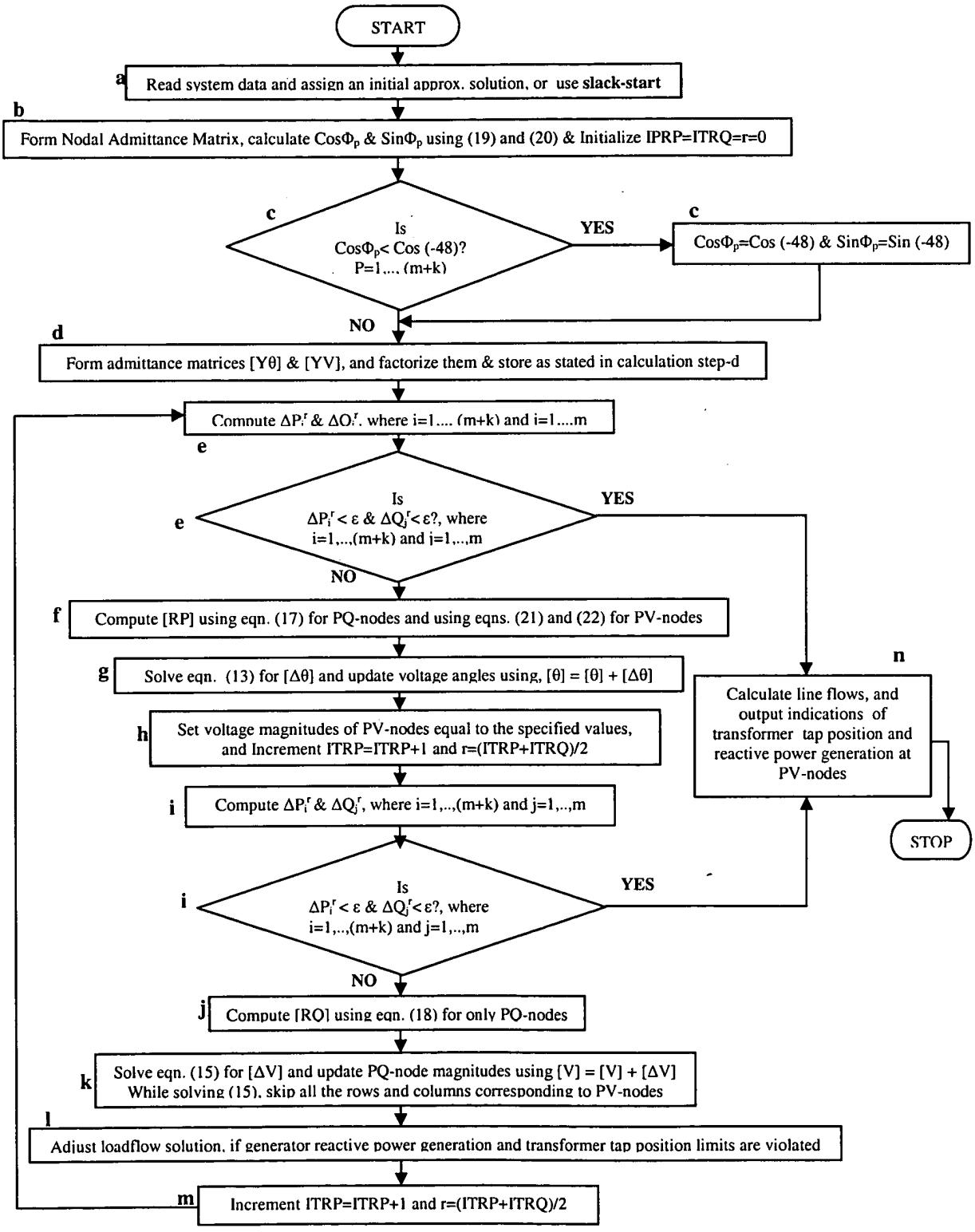

Fig.1b:Prior Art: Flow-chart: Super Super Decoupled Loadflow (SSDL) Method

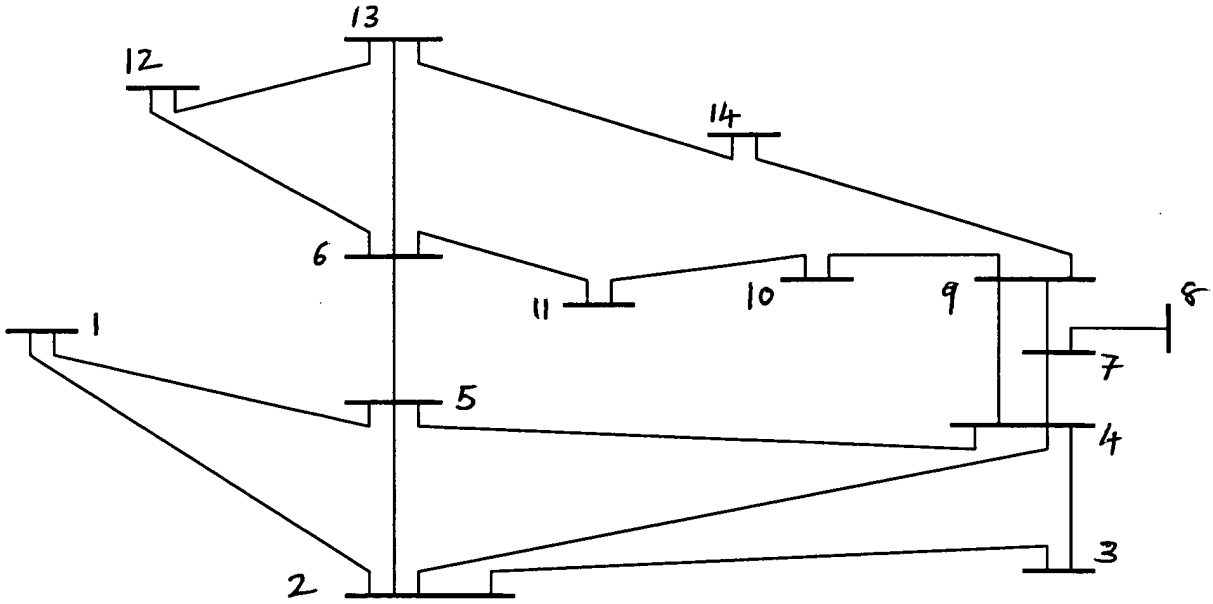

Fig. 2a: One-line diagram of IEEE 14-node network

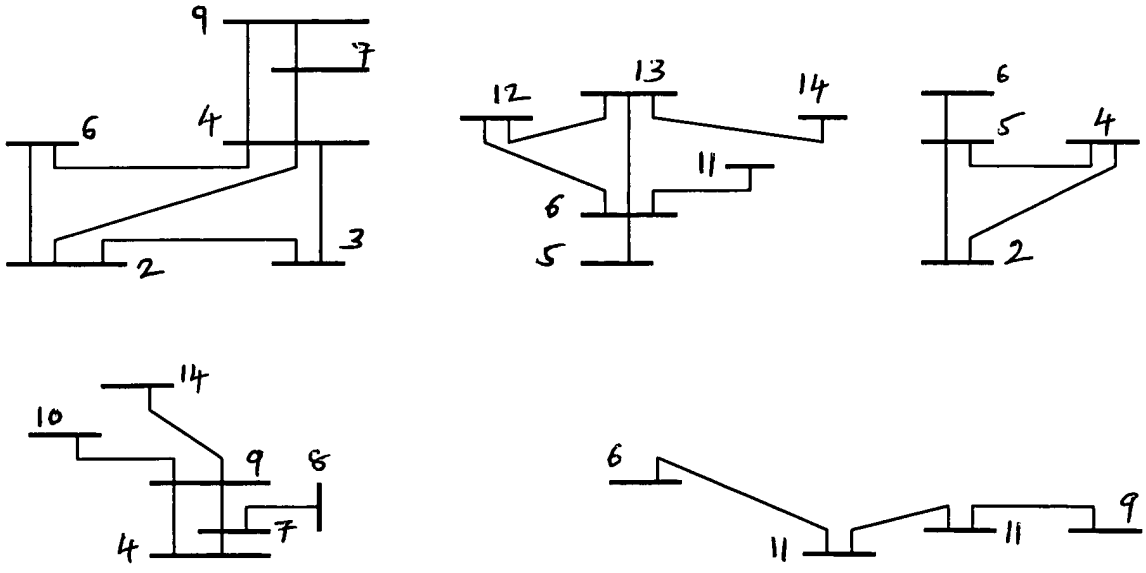

Fig. 2c: Non-redundant Level-1 sub-networks of fig. 2b are regrouped to reduce the number of processors required without increasing the number of nodes in any regrouped sub-network larger than the original largest sub-network of 6-nodes

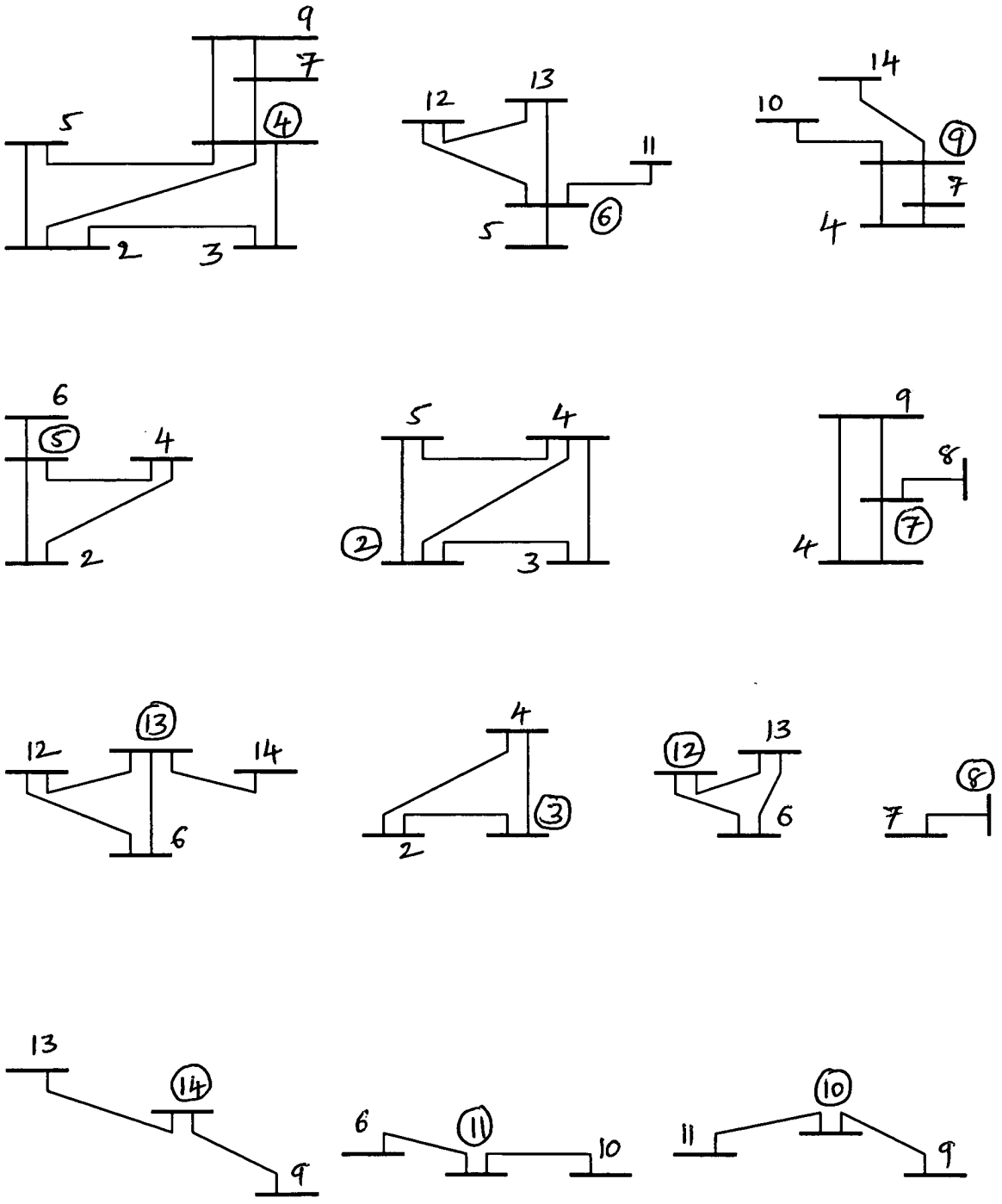

Fig. 2b: **Level-1 sub-networks around circled nodes for the network of fig. 2 a**

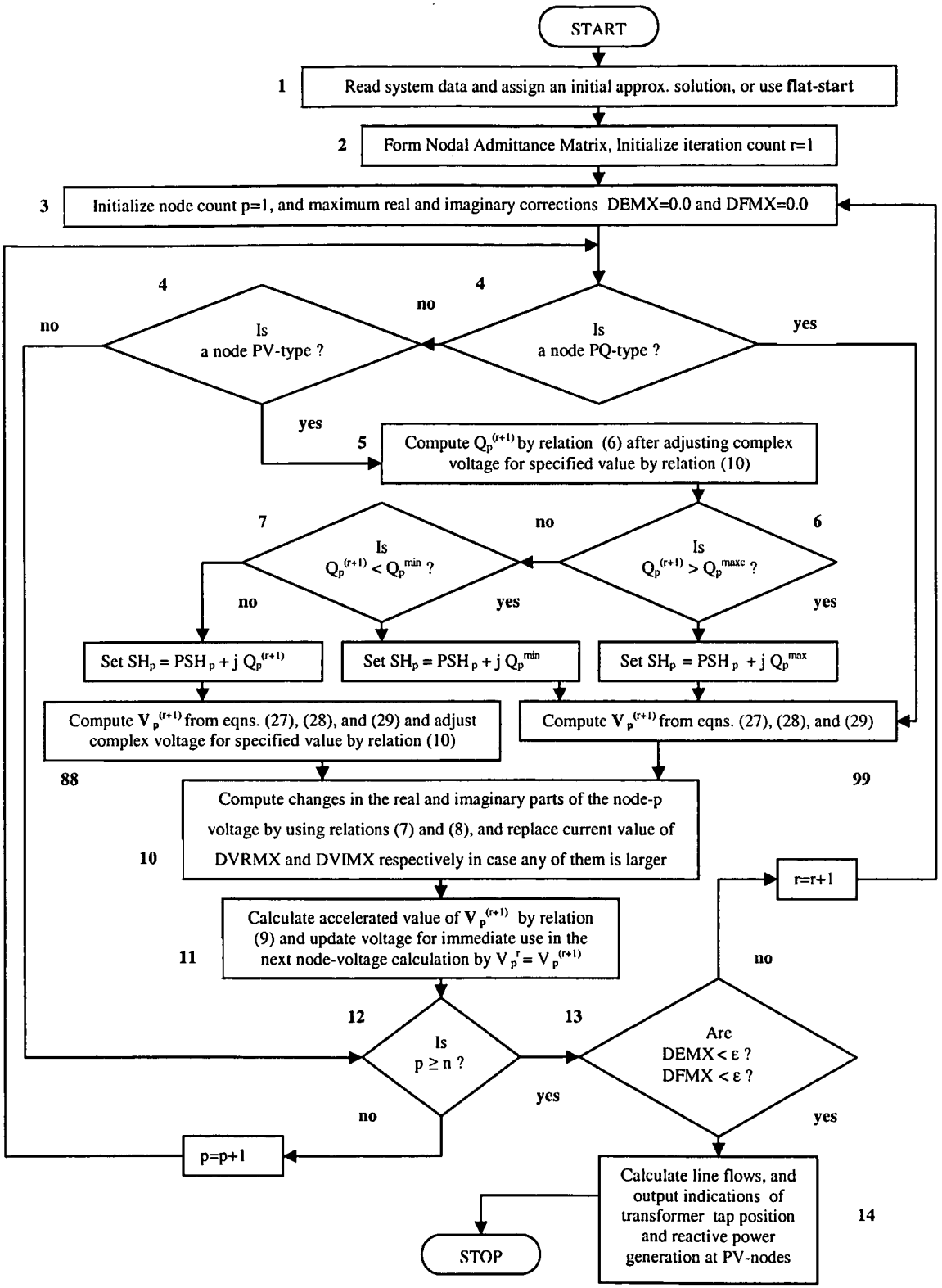

Fig. 3a: Invention: flow-chart of Gauss-Seidel-Patel Loadflow (GSPL) Method

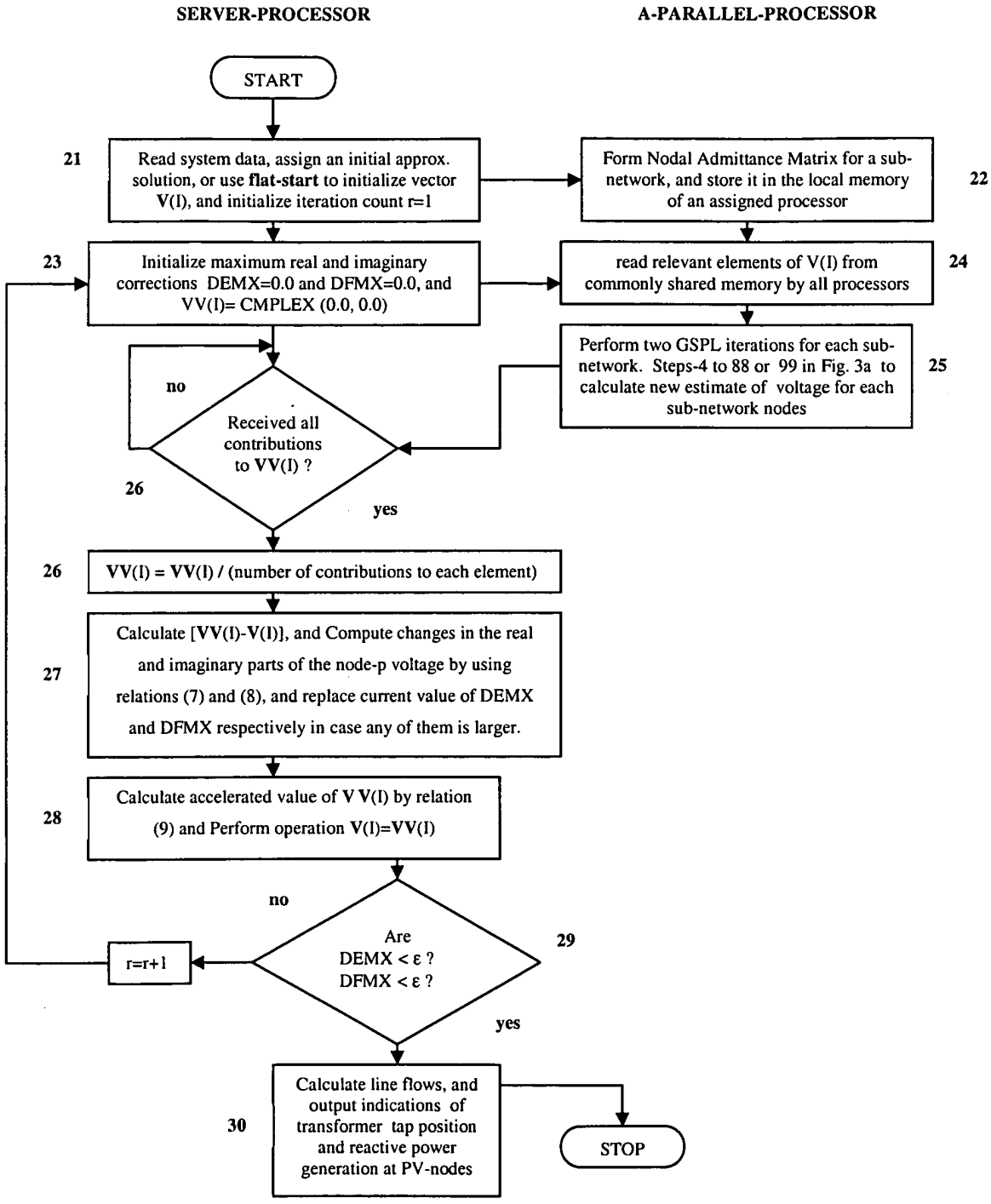

Fig. 3b: Invention: flow-chart of Parallel-Gauss-Seidel-Patel Loadflow (PGSPL) Method

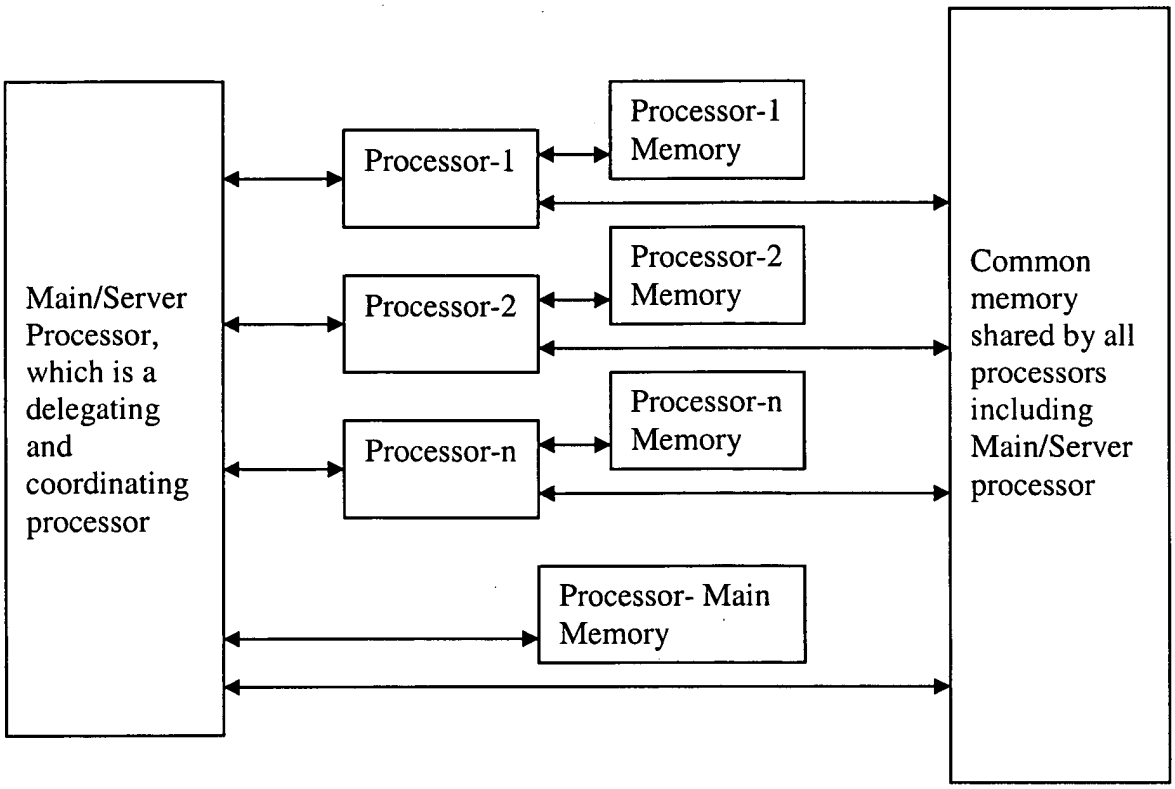

Fig. 4: Invented Parallel computer Architecture/organization

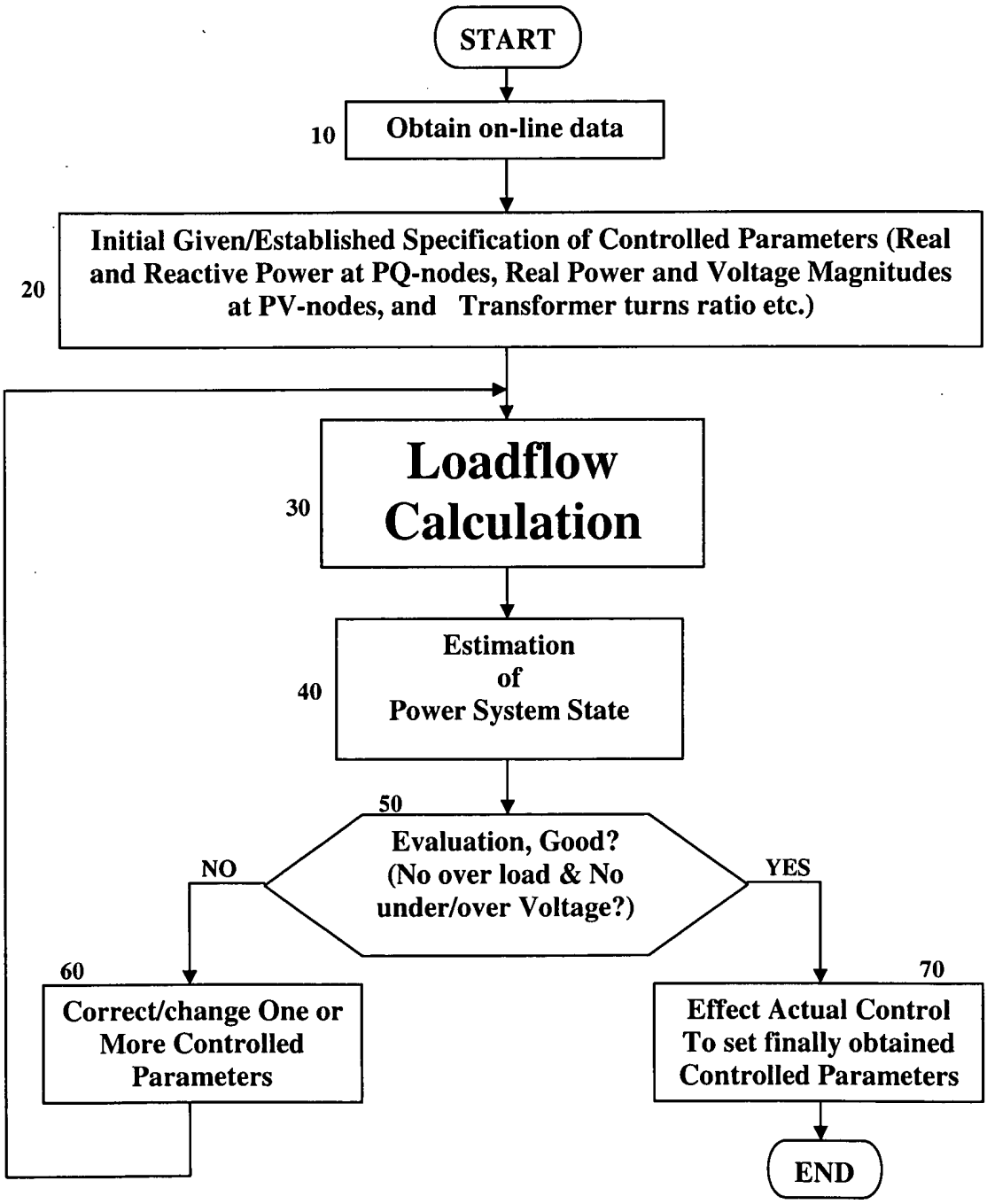

Fig. 5: Loadflow Calculation in Power Flow Control and/or Voltage Control in Electrical Power System

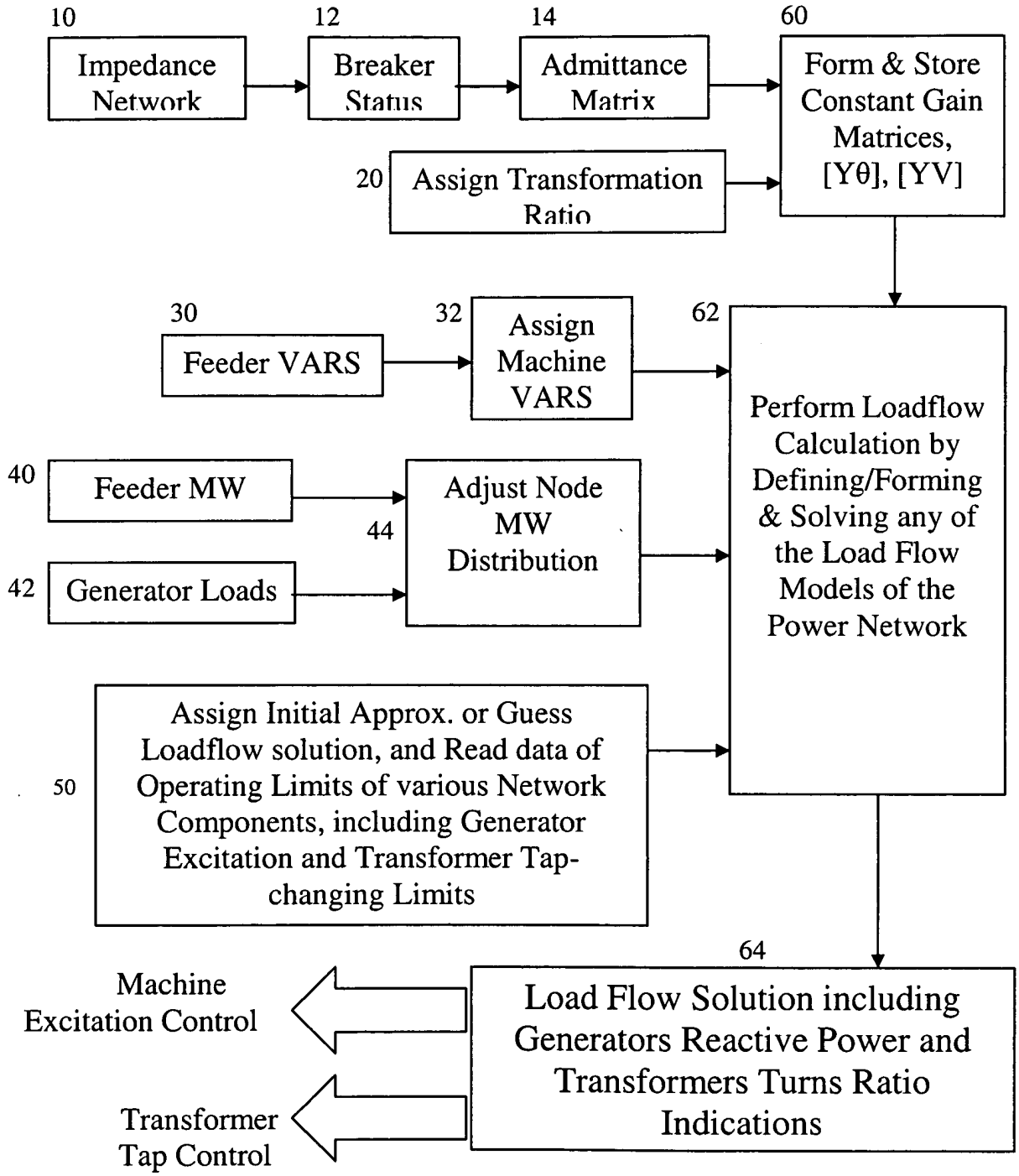

Fig. 6: Load-Flow Calculation for Voltage Control in Electrical Power System

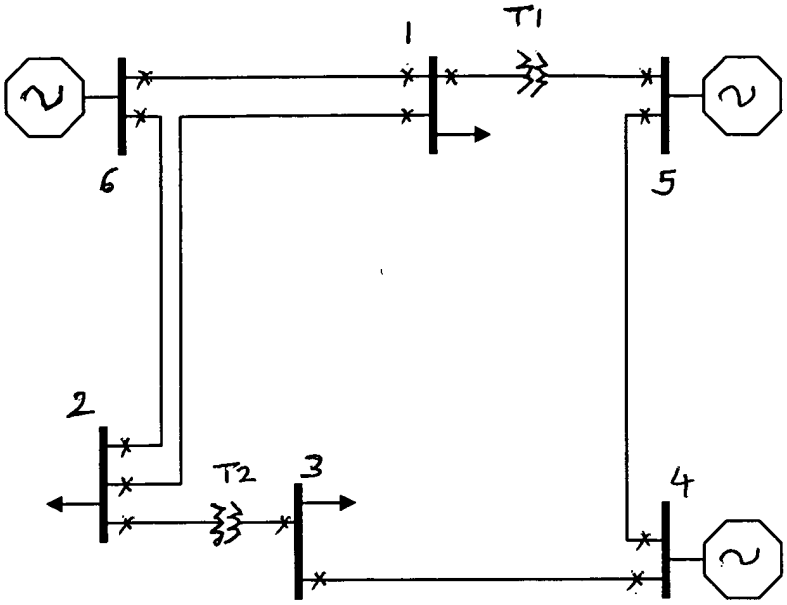

Fig. 7: An Exemplary 6-node Power System

Nodes: 1, 2, 3 are PQ-nodes
Nodes: 4 and 5 are PV-nodes
Nodes: 6 is the slack/swing/reference node
Transformers T1 and T2 are tap-changing